

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:	09/786.63516
Source:	1FW/6
Date Processed by STIC:	9/20/04
_	

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER

VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND

TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>, EFS Submission User Manual ePAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box-1450, Alexandria, VA 22313-1450
- U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202

Revised 05/17/04



IFW16

RAW SEQUENCE LISTING DATE: 09/20/2004
PATENT APPLICATION: US/09/786,635B TIME: 16:18:10

Input Set : A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\I786635B.raw

```
5 <120> TITLE OF INVENTION: ATP binding cassette genes and proteins for diagnosis
                        and treatment of lipid disorders and inflammatory
                        diseases
          9 <130> FILE REFERENCE: ATP binding cassette genes and protein
C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/786,635B
C--> 12 <141> CURRENT FILING DATE: 2001-05-22
        14 <150> PRIOR APPLICATION NUMBER: 101706
        15 <151> PRIOR FILING DATE: 1998-09-25
        17 <160> NUMBER OF SEQ ID NOS: 54
        19 <170> SOFTWARE: PatentIn Ver. 2.0
        21 <210> SEO ID NO: 1
                                                                                                                  Does Not Comply
        22 <211> LENGTH: 6880
        23 <212> TYPE: DNA
        24 <213> ORGANISM: Human
        26 <220> FEATURE:
                                                                                                       The sales of the parties of the sales of the
        27 <223> OTHER INFORMATION: cDNA of ABCA1 (ABC1)
        29 <400> SEQUENCE: 1
        30 caaacatqtc aqctqttact ggaagtggcc tggcctctat ttatcttcct gatcctgatc 60
        31 tctgttcggc tgagctaccc accctatgaa caacatgaat gccattttcc aaataaagcc 120
        32 atgccctctg caggaacact tccttgggtt caggggatta tctgtaatgc caacaacccc 180
        33 tgtttccgtt acccgactcc tggggaggct cccggagttg ttggaaactt taacaaatcc 240
        34 attqtqqctc qcctgttctc agatgctcgg aggcttcttt tatacagcca gaaagacacc 300
        35 agcatgaagg acatgcgcaa agttctgaga acattacagc agatcaagaa atccagctca 360
        36 aacttgaagc ttcaagattt cctggtggac aatgaaacct tctctgggtt cctgtatcac 420
        37 aacctetete teccaaagte taetgtggae aagatgetga gggetgatgt eatteteeae 480
        38 aaggtatttt tgcaaggcta ccagttacat ttgacaagtc tgtgcaatgg atcaaaatca 540
        39 gaagagatga ttcaacttgg tgaccaagaa gtttctgagc tttgtggcct accaagggag 600
        40 aaactggctg cagcagagcg agtacttcgt tccaacatgg acatcctgaa gccaatcctg 660
        41 agaacactaa actctacatc tcccttcccg agcaaggagc tggccgaagc cacaaaaaaca 720
        42 tigctgcata gtcttgggac tctggcccag gagctgttca gcatgagaag ctggagtgac 780
        43 atgcgacagg aggtgatgtt tctgaccaat gtgaacagct ccagctcctc cacccaaatc 840
        44 taccaggetg tgtctcgtat tgtctgcggg catcccgagg gaggggggct gaagatcaag 900
        45 tctctcaact ggtatgagga caacaactac aaagccctct ttggaggcaa tggcactgag 960
        46 gaagatgctg aaaccttcta tgacaactct acaactcctt actgcaatga tttgatgaag 1020
        47 aatttggagt ctagtcctct ttcccgcatt atctggaaag ctctgaagcc gctgctcgtt 1080
        48 qqqaaqatcc tgtatacacc tgacactcca gccacaaggc aggtcatggc tgaggtgaac 1140
        49 aagacettee aggaactgge tgtgtteeat gatetggaag geatgtggga ggaacteage 1200
        50 cccaagatet ggacetteat ggagaacage caagaaatgg accttgteeg gatgetgttg 1260
        51 gacagcaggg acaatgacca cttttgggaa cagcagttgg atggcttaga ttggacagcc 1320
        53 qtqtacacct ggagagaagc tttcaacgag actaaccagg caatccggac catatctcgc 1440
        54 ttcatggagt gtgtcaacct gaacaagcta gaacccatag caacagaagt ctggctcatc 1500
```

3 <110> APPLICANT: Bayer AG

PATENT APPLICATION: US/09/786,635B

DATE: 09/20/2004 TIME: 16:18:10

Input Set : A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\1786635B.raw

```
55 aacaagtcca tggagctgct ggatgagagg aagttctggg ctggtattgt gttcactgga 1560
56 attactccag gcagcattga gctgccccat catgtcaagt acaagatccg aatggacatt 1620
57 gacaatgtgg agaggacaaa taaaatcaag gatgggtact gggaccctgg tcctcgagct 1680
58 gacccctttg aggacatgcg gtacgtctgg gggggcttcg cctacttgca ggatgtggtg 1740
59 gagcaggcaa tcatcagggt gctgacgggc accgagaaga aaactggtgt ctatatgcaa 1800
60 cagatgccct atccctgtta cgttgatgac atctttctgc gggtgatgag ccggtcaatg 1860
61 cccctcttca tgacgctggc ctggatttac tcagtggctg tgatcatcaa gggcatcgtg 1920
62 tatgagaagg aggcacggct gaaagagacc atgcggatca tgggcctgga caacagcatc 1980
63 ctctggttta gctggttcat tagtagcctc attcctcttc ttgtgagcgc tggcctgcta 2040
64 gtggtcatcc tgaagttagg aaacctgctg ccctacagtg atcccagcgt ggtgtttgtc 2100
65 ttcctgtccg tgtttgctgt ggtgacaatc ctgcagtgct tcctgattag cacactcttc 2160
66 tocagagoca acctggcago agoctgtggg ggcatcatot acttcacgot gtacctgccc 2220
67 tacgtcctgt gtgtggcatg gcaggactac gtgggcttca cactcaagat cttcgctagc 2280
68 ctgctgtctc ctgtggcttt tgggtttggc tgtgagtact ttgccctttt tgaggagcag 2340
69 ggcattggag tgcagtggga caacctgttt gagagtcctg tggaggaaga tggcttcaat 2400
70 ctcaccactt cggtctccat gatgctgttt gacaccttcc tctatggggt gatgacctgg 2460
71 tacattgagg ctgtctttcc aggccagtac ggaattccca ggccctggta ttttccttgc 2520
72 accaagteet actggtttgg egaggaaagt gatgagaaga gecaeeetgg tteeaaccag 2580
73 aagagaatat cagaaatctg catggaggag gaacccaccc acttgaagct gggcgtgtcc 2640
74 attcagaacc tggtaaaagt ctaccgagat gggatgaagg tggctgtcga tggcctggca 2700
75 ctgaattttt atgagggcca gatcacctcc ttcctgggcc acaatggagc ggggaagacg 2760
76 accaccatgt caatcctgac cgggttgttc cccccgacct cgggcaccgc ctacatcctg 2820
77 ggaaaagaca ttcgctctga gatgagcacc atccggcaga acctgggggt ctgtccccag 2880
78 cataacgtgc tgtttgacat gctgactgtc gaagaacaca tctggttcta tgcccgcttg 2940
79 aaagggctct ctgagaagca cgtgaaggcg gagatggagc agatggccct ggatgttggt 3000
80 ttgccatcaa gcaagctgaa aagcaaaaca agccagctgt caggtggaat gcagagaaag 3060
81 ctatctgtgg ccttggcctt tgtcggggga tctaaggttg tcattctgga tgaacccaca 3120
82 gctggtgtgg accettacte cegeagggga atatgggage tgctgetgaa atacegaeaa 3180
83 ggccgcacca ttattctctc tacacaccac atggatgaag cggacgtcct gggggacagg 3240
84 attgccatca teteccatgg gaagetgtge tgtgtggget cetecetgtt tetgaagaac 3300
85 cagctgggaa caggctacta cctgaccttg gtcaagaaag atgtggaatc ctccctcagt 3360
86 tectgeagaa acagtagtag caetgtgtea taeetgaaaa aggaggaeag tgttteteag 3420
87 agcagttctg atgctggcct gggcagcgac catgagagtg acacgctgac catcgatgtc 3480
88 tctgctatct ccaacctcat caggaagcat gtgtctgaag cccggctggt ggaagacata 3540
89 gggcatgagc tgacctatgt gctgccatat gaagctgcta aggagggagc ctttgtggaa 3600
90 ctctttcatg agattgatga ccggctctca gacctgggca tttctagtta tggcatctca 3660
91 gagacgaccc tggaagaaat attcctcaag gtggccgaag agagtggggt ggatgctgag 3720
92 acctcagatg gtaccttgcc agcaagacga aacaggcggg ccttcgggga caagcagagc 3780
93 tgtcttcgcc cgttcactga agatgatgct gctgatccaa atgattctga catagaccca 3840
94 gaatccagag agacagactt gctcagtggg atggatggca aagggtccta ccaggtgaaa 3900
95 ggctggaaac ttacacagca acagtttgtg gcccttttgt ggaagagact gctaattgcc 3960
96 agacggagtc ggaaaggatt ttttgctcag attgtcttgc cagctgtgtt tgtctgcatt 4020
97 gcccttgtgt tcagcctgat cgtgccaccc tttggcaagt accccagcct ggaacttcag 4080
98 ccctggatgt acaacgaaca gtacacattt gtcagcaatg atgctcctga ggacacggga 4140
99 accetggaac tettaaacge eetcaccaaa gaccetgget tegggaceeg etgtatggaa 4200
100 ggaaacccaa tcccagacac gccctgccag gcaggggagg aagagtggac cactgcccca 4260
101 gttccccaga ccatcatgga cctcttccag aatgggaact ggacaatgca gaacccttca 4320
102 cctgcatgcc agtgtagcag cgacaaaatc aagaagatgc tgcctgtgtg tcccccaggg 4380
103 gcagggggc tgcctcctcc acaaagaaaa caaaacactg cagatatcct tcaggacctg 4440
```

PATENT APPLICATION: US/09/786,635B TIME: 16:18:10

DATE: 09/20/2004

Input Set : A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\1786635B.raw

```
104 acaggaagaa acatttegga ttatetggtg aagaegtatg tgeagateat agecaaaage 4500
105 ttaaagaaca agatetgggt gaatgagttt aggtatggeg getttteeet gggtgteagt 4560
106 aatactcaag cacttcctcc gagtcaagaa gttaatgatg ccaccaaaca aatgaagaaa 4620
107 cacctaaagc tggccaagga cagttctgca gatcgatttc tcaacagctt gggaagattt 4680
108 atgacaggac tggacaccag aaataatgtc aaggtgtggt tcaataacaa gggctggcat 4740
109 gcaatcagct ctttcctgaa tgtcatcaac aatgccattc tccqqqccaa cctgcaaaaq 4800
110 ggagagaacc ctagccatta tggaattact gctttcaatc atcccctgaa tctcaccaag 4860
111 cagcagetet cagaggtgge teegatgace acateagtgg atgteettgt gteeatetgt 4920
112 gtcatctttg caatgtcctt cgtcccagcc agctttgtcg tattcctgat ccaggagcgg 4980
113 gtcagcaaag caaaacacct gcagttcatc agtggagtga agcctgtcat ctactggctc 5040
114 totaattttg totgggatat gtgcaattac gttgtccctg ccacactggt cattatcatc 5100
115 ttcatctgct tccagcagaa gtcctatgtg tcctccacca atctgcctgt gctagccctt 5160
116 ctacttttgc tgtatgggtg gtcaatcaca cetetcatgt acceagecte etttgtgtte 5220
117 aagatcccca gcacagccta tgtggtgctc accagcgtga acctcttcat tggcattaat 5280
118 ggcagcgtgg ccacctttgt gctggagctg ttcaccgaca ataagctgaa taatatcaat 5340
119 gatateetga agteegtgtt ettgatette eeacattttt geetgggaeg agggeteate 5400
120 gacatggtga aaaaccaggc aatggctgat gccctggaaa ggtttgggga gaatcgcttt 5460
121 gtgtcaccat tatcttggga cttggtggga cgaaacctet tegecatgge egtggaaggg 5520
122 gtggtgttct tcctcattac tgttctgatc cagtacagat tcttcatcag gcccagacct 5580
123 gtaaatgcaa agctatctcc tetgaatgat gaagatgaag atgtgaggcg ggaaagacag 5640
124 agaattettg atggtggagg ceagaatgae atettagaaa teaaggagtt gacgaagata 5700
125 tatagaagga agcggaagcc tgctgttgac aggatttgcg tgggcattcc tcctggtgag 5760
126 tgctttgggc tcctgggagt taatggggct ggaaaatcat caactttcaa gatgttaaca 5820
127 ggagatacca ctgttaccag aggagatgct ttccttaaca gaaatagtat cttatcaaac 5880
128 atccatgaag tacatcagaa catgggctac tgccctcagt ttgatgccat cacagagctg 5940
129 ttgactggga gagaacacgt ggagttettt gecettttga gaggagteec agagaaagaa 6000
130 gttggcaagg ttggtgagtg ggcgattcgg aaactgggcc tcgtgaagta tggagaaaaa 6060
131 tatgetggta actatagtgg aggeaacaaa egeaagetet etaeageeat ggetttgate 6120
132 ggcgggcctc ctgtggtgtt tctggatgaa cccaccacag gcatggatcc caaagcccgg 6180
133 cggttcttgt ggaattgtgc cctaagtgtt gtcaaggagg ggagatcagt agtgcttaca 6240
134 teteatagta tggaagaatg tgaagetett tgeaetagga tggeaateat ggteaatgga 6300
135 aggttcaggt gccttggcag tgtccagcat ctaaaaaaata ggtttggaga tggttataca 6360
136 atagttgtac gaatagcagg gtccaacccg gacctgaagc ctgtccagga tttctttgga 6420
137 cttgcatttc ctggaagtgt tccaaaagag aaacaccgga acatgctaca ataccagctt 6480
138 ccatcttcat tatcttctct ggccaggata ttcagcatcc tctcccagag caaaaagcqa 6540
139 ctccacatag aagactactc tgtttctcag acaacacttg accaagtatt tgtgaacttt 6600
140 gccaaggacc aaagtgatga tgaccactta aaagacctct cattacacaa aaaccagaca 6660
141 gtagtggacg ttgcagttct cacatctttt ctacaggatg agaaagtgaa agaaagctat 6720
142 gtatgaagaa teetgtteat aeggggtgge tgaaagtaaa gagggaetag aettteettt 6780
143 gcaccatgtg aagtgttgtg gagaaaagag ccaqaagttg atgtgggaag aagtaaactg 6840
144 gatactgtac tgatactatt caatgcaatg caattcaatg
146 <210> SEQ ID NO: 2
147 <211> LENGTH: 2201
148 <212> TYPE: PRT
149 <213> ORGANISM: Human
151 <220> FEATURE:
152 <223> OTHER INFORMATION: Peptide sequence of ABCA1 (ABC1)
154 <400> SEQUENCE: 2
155 Met Pro Ser Ala Gly Thr Leu Pro Trp Val Gln Gly Ile Ile Cys Asn
```

PATENT APPLICATION: US/09/786,635B

DATE: 09/20/2004 TIME: 16:18:10

Input Set : A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\I786635B.raw

						5					10					15	
1	.56	77.	7 an	7 an	Pro		Dho	Δrα	Tvr	Pro		Pro	Glv	Glu	Ala		Glv
		Ald	ASII	ASII	20	Суз	FIIC	nr 9	- y -	25			0-1		30		2
1	L59	17-1	77 n T	Gl v	Asn	Dhe	Δen	T.vg	Ser		Val	Ala	Ara	Leu		Ser	Asp
		vai	vaı	35	Abii	FIIC	ASII	шуы	40	110	, ,	1120	5	45			
1	L62	77.	T. ====		Leu	T 011	T 011	ጥኒተዮ		Gln	Lvs	Asp	Thr		Met	Lvs	Asp
		Ala		Arg	neu	ьец	шеи	55	SCI	0111	БуБ	1100	60	DOL		-1-	
1	L65	34-1-	50	T	Val	T 011	7~~		Τ.Δ11	Gln	Gln	Tle		Lvs	Ser	Ser	Ser
			Arg	гуя	vai	цец	70	1111	пец	GIII	0111	75	2,5		502		80
-	L68	65	T	T	Leu	~1n		Dho	T 011	172]	Acn		Glu	Thr	Phe	Ser	
		Asn	ьeu	гля	ьец		Asp	rne	пец	val	90	AUII	O.L.a	****	1 110	95	0-1
-	171	73 1	T	m	His	85	T 011	Cor	Lou	Dro		Ser	Thr	Val	Asp		Met
		Pne	ьeu	Tyr		ASII	Leu	Ser	цец	105	цур	Ser	1111	٧٠٠	110	2.7.5	
	174	_	_		100	TT - 3	T1 -	T 011	ni a		T/all	Dhe	T.611	Gln		Tur	Gln
		Leu	Arg		Asp	vai	тте	цец		гу	val	FIIC	пец	125	OLY	+ y +	02.11
	177	_		115	1		T	a	120		Cor	Tara	cor		Glu	Met	Tle
		Leu		ьeu	Thr	ser	ьeu		ASII	GIY	SET	пуъ	140	Giu	Olu	nec	
	180		130		_	~7	~ 1	135	a	a1	T 011	Cara	-	T 011	Dro	Λrα	Glu
			Leu	GLY	Asp	GIN		vaı	ser	GIU	пеп	155	Gry	пси	110	my	160
	183	145	_				150	7	7747	т от	7. 20.00		7 an	Mot	Acn	Tle	
		Lys	Leu	Ala	Ala		GIU	Arg	vaı	ьeu		Ser	MSII	Mec	мър	175	пса
	186				_	165	ml	.	70	0.000	170	Cor	Dro	Dho	Dro		Lve
		Lys	Pro	He	Leu	Arg	Thr	ьeu	ASII	5er	TIII	ser	PIO	FIIC	190	DCT	цуз
	189		_		180		ml	T	m)	185	т от	uia	cor	Lou		Thr	T.e.11
		Glu	Leu		Glu	Ата	Tnr	ьуѕ		ьеи	Leu	UIS	ser	205	Gry	TILL	шси
	192	_	-	195	_	-1			200	C	Ш	Cox	7 an		λνα	Gl n	Glu
		Ala		GLu	Leu	Pne	Ser		arg	ser	пр	ser	220	мес	Arg	GIII	GIU
	195	_	210	_,	_	1		215	7		Com	Cor		Car	Thr	Gln	Tle
			Met	Phe	Leu	Thr				ser	ser	235	ser	per	TIIT	GIII	240
	198	225					230	-1-			C1		Dro	Clu	Glv	Gl v	
		Tyr	GIn	Ala	Val			ıте	vai	Cys	250	птъ	PIO	GIU	Gry	255	O ₁
	201	_	_		_	245		7	П	T			Λαn	λan	Фул		Δla
		Leu	Lys	He	Lys		Leu	ASII	пр			Asp	ASII	ASII	270	цур	1110
	204				260		41	m1	a 1	265		ת דת	C111	Thr			Agn
		Leu	Phe		Gly	Asn	GIY	Thr			Asp	на	Giu	285	riic	ı yı	пор
	207		_ ` .	275	1		m		280		T 011	Mot	Two			Glu	Ser
					Thr	Pro	Tyr			Asp	Leu	Mec	300	ASII	пец	Olu	DCL
	210	_	290		_	.	-1-	295		T	ת דת	T 011			T.211	T.e.11	Val
				Leu	Ser	Arg			пр	ьуѕ	АІа			FIC	, пса	ыса	320
	213	305	_		_	_	310		7	mla so	Dwa	315		7.20	. Gln	Wa 1	
	215	Gly	Lys	He	Leu			Pro	Asp	Tnr	220	Ala	1111	ALG	GIII	335	MEC
	216			_		325		_,	~7	~1	330		777	Dho	IIia		
	218	Ala	Glu	Val	Asn		Thr	Phe	Gin			Ala	vai	PHE	SEV	Asp	пеп
	219				340			_	_	345		- 7-		mb.	350		C1.,
	221	Glu	Gly		Trp	Glu	. Glu	Leu			ь га	ire	Trp	THE	. Pne	Met	Giu
	222			355					360			_	_	365		. 7	. 7
	224	Asn	Ser	Glr	Glu	Met	Asp			Arg	Met	Leu			ser	arg	Asp
	225		370				=	375		_	_	~-	380			ml	. 7\T_
	227	Asn	Asp	His	Phe	Trp			Gln	Leu	ı Asp			ASE	rrp	rnr	ALG
	228	385					390					395					400

PATENT APPLICATION: US/09/786,635B

DATE: 09/20/2004 TIME: 16:18:10

Input Set : A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\I786635B.raw

230 231	Gln	Asp	Ile	Val	Ala 405	Phe	Leu	Ala	Lys	His 410	Pro	Glu	Asp	Val	Gln 415	Ser
233	Ser	Asn	Gly	Ser 420		Tyr	Thr	Trp	Arg 425	Glu	Ala	Phe	Asn	Glu 430	Thr	Asn
	Gln	Ala			Thr	Ile	Ser	Arg 440		Met	Glu	Cys	Val 445	Asn	Leu	Asn
237 239	Lys	Leu	435 Glu	Pro	Ile	Ala			Val	Trp	Leu			Lys	Ser	Met
240		450 -	_	3	01	7	455	Dha	Tro	ת דת	Clv	460	val	Dhe	Thr	Glv
243	465					470					475			Phe		480
246					485					490				Tyr	495	
248 249	Arg	Met	Asp	Ile 500	Asp	Asn	Val	Glu	Arg 505	Thr	Asn	Lys	Ile	Lys 510	Asp	Gly
251	Tyr	Trp			Gly	Pro	Arg	Ala 520		Pro	Phe	Glu	Asp 525	Met	Arg	Tyr
252	บวไ	Trn	515	Glv	Phe	Δla	Tvr		Gln	Asp	Val	Val		Gln	Ala	Ile
255		530					535					540				
257	Ile	Arg	Val	Leu	Thr	Gly	Thr	Glu	Lys	Lys	Thr	Gly	Val	\mathtt{Tyr}	Met	Gln
258	545					550					555					560
	Gln	Met	Pro	Tyr	Pro 565	Cys	Tyr	Val	Asp	Asp 570	Ile	Phe	Leu	Arg	Va⊥ 575	Met
261	Com	7. **	cor	Mot		T.011	Dhe	Met	Thr		Ala	Tro	Ile	Tyr	_	Val
264				580					585					590		
266	Ala	Val	Ile	Ile	Lys	Gly	Ile	Val	Tyr	Glu	Lys	Glu	Ala	Arg	Leu	Lys
267			595					600					605			
	Glu		Met	Arg	Ile	Met		Leu	Asp	Asn	Ser		Leu	Trp	Pne	ser
270		610	т1.	Cor	cor	Lau	615	Dro	T.e11	T.e.	Val	620 Ser	Ala	Glv	Leu	Leu
	625	Pne	тте	Ser	ser	630		FIO	шец	шеи	635	DCI	1114	\u00e41		640
275	Val	Val	Tle	Leu	Lvs			Asn	Leu	Leu		Tyr	Ser	Asp	Pro	Ser
276					645					650					655	
278	Val	Val	Phe	Val	Phe	Leu	Ser	Val			Val	Val	Thr	Ile	Leu	Gln
279				660					665			_	_	670		77.
	Cys	Phe			Ser	Thr	Leu			Arg	Ala	Asn	. ьеи 685	АІа	Ата	Ala
282		~3	675	-1 -	- 1 -		Dha	680		TT TT	Tau	Dro			T.e.ii	Cvs
	Cys			TTE	тте	Tyr	695		ьeu	тут	пец	700	TYL	Val	пси	Cys
285	₹7 ~]	690	Trn	Gln	Δen	ጥህን			Phe	Thr	Leu			Phe	Ala	Ser
	705		ııp													720
290	Leu	Leu	Ser									Glu	Tyr	Phe	Ala	Leu
291					725					730					735	
293	Phe	Glu	Glu	Gln	Gly	Ile	Gly	val	Gln	Trp	Asp	Asn	Lev	Phe	Glu	Ser
294				740					745			_	7	750		37.4
		Val			Asp	Gly	Phe			Thr	Thr	Ser	765	. ser	мет	Met
297	_	D1	755		nh.	T	П	760 Gla		M△+	Thr	· фът			Glu	Δla
				inr	rne	ьeu	775		val	. net	. TIIT	780	, <u>.</u> y.			Ala
300	77⇒7	770 Phe		Glv	G]n	Tvr			Pro	Arc	Pro			. Phe	Pro	Cys
302	val	FIIG		, сту	J.11	· - y -	- - y				,	F	4			-

The types of errors shown exist throughout the Sequence Listing. Please check subsequent

sequences for similar errors.

```
<211> 1130
<212> DNA
<213> Human
<220>
                                                                          See p. 7

for every

explanation

(h's need

explanation

in (2207-62237)

section)
<223> human cDNA of ABCB9
<400> 3
gccaat nca cggtttcatc atggaactcc aggacggcta cagcacagag acaggggaga 60
agggegecea getgteaggt ggeeagaage agegggtgge catggeeghg getetggtge 120
ggaacccccc agtcctcatc ctggatgaag ccaccagege tttggatgcc gagagegagt 180
atotgatoca goaggocato catggoaaco tgtoagaago acaoggtact catcatogog 240
caccqqctqa qcaccqtqqa qcacqcqcac ctcattqtqq tqctqqacaa gggccqcqta 300
gtgcagcagg gcacccacca gcagcttgct tgccccaggg cgggctttta cggcaagcth 360
gttgcagcgg cagatgtggg gtttcaaggc cgcagacttc acagctggcc acaacgagcc 420
tgtagccaac gggtcacaag gcctgatggg gggcccctcc ttcgcccggt ggcagaggac 480
ccggtgcctg cctggcagat gtgcccacgg aggtttccag ctgccctacc gagcccaggc 540
ctgcagcact gaaagacgac ctgccatgte ccatgateae egettintgea atettgeece 600
tggtccctqc cccattccca gggcactctt acccannact gggggatgtc caagagcata 660
gteeteteee cataceeete caqaqaaqqq getteeetgt eeggagggag acaeggggaa 720
egggatttte egtetetece tettgeeage tetgtgagte tggeeaggge gggtagggag 780
cgtggagggc atctgtctgc caattgcccg ctgccaatct aagccagtct cactgtgacc 840
acacgaaacc tcaactgggg gagtgaggag ctggccaggt ctggaggggc ctcaggtgcc 900
eccagocogo caccoaqett togococtog toaatcaacc cotggetgge ageogecete 960
cccacacccg ccctgtgct ctgctgtctg gaggccacgt ggaccttcat gagatgcatt 1020
ctcttctgtc tttggtggan gggatggtgc aaagcccagg atctggcttt gccagaggtt 1080
gcaacatgtt gagagaaccc ggtcaataaa gtgtactacc tcttacccct
```

<210> 3

VARIABLE LOCATION SUMMARY

PATENT APPLICATION: US/09/786,635B

DATE: 09/20/2004 TIME: 16:18:11

Input Set : A:\LEA33298 - seq list 8-2004.txt Output Set: N:\CRF4\09202004\I786635B.raw

erro eplasation Use of n's or Xaa's (NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing. Use of <220> to <223> is MANDATORY if n's or Xaa's are present. in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:3; N Pos. 8,109,360,586,636,637,638,1040

Seq#:4; N Pos. 944,950,957,970,1001,1002,1003,1007

Seq#:13; N Pos. 4208,4210,4211,4212,4227,4228,4229,4231,4253,4677,4691,4707

Seq#:13; N Pos. 4721,4752,4754,4772,4773

Seq#:20; N Pos. 5,2909

Seq#:25; N Pos. 1963

Seq#:31; N Pos. 856,1009,1128,1314,1326,1328,1343,1345,1346,1378,1415,2477

Seq#:31; N Pos. 2540

Seq#:54; N Pos. 856,1009,1128,1314,1326,1328,1343,1345,1346,1378,1415,2477

Seq#:54; N Pos. 2540

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/786,635B

DATE: 09/20/2004 TIME: 16:18:11

Input Set : A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\1786635B.raw

L:11 M:270 C: Current Application Number differs, Replaced Application Number L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:579 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:3 L:579 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:3 L:579 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0 M:341 Repeated in SeqNo=3 L:623 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:4 L:623 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:4 L:623 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:900 M:341 Repeated in SeqNo=4 L:1205 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:13 L:1205 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:13 L:1205 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:4200 M:341 Repeated in SeqNo=13 L:1577 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:20 L:1577 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:20 L:1577 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0 M:341 Repeated in SeqNo=20 L:1720 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:25 L:1720 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:25 L:1720 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:1920 L:1986 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:31 L:1986 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:31 L:1986 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:840 M:341 Repeated in SeqNo=31 L:2289 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:54 L:2289 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:54 L:2289 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:840 M:341 Repeated in SeqNo=54